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ABSTRACT

This document is an exploratory inquiry into the development of collaborative baccalaureate nursing programs in Ontario, Canada, identifying key policy issues and economic considerations. The introduction discusses the purpose of the project and its limitations and methodology, and compares the English and French language nursing programs. Part 1 of the paper, entitled "The Present Situation and Forces Contributing to Change," describes the present state of nursing education, the baccalaureate and diploma, the "legislation" and education route to entry to practice, and collaborative and articulated programs. Part 2, "Examining Major Policy Options from the Perspective of Impact on Costs and Funding," consists of two sections. Section A addresses impacts on cost, such as length of time for degree obtainment, parallel degree programs, integration and specialization of institutions, cost of resources, and articulated vs. integrated programs. Section B addresses funding issues like sectoral funding formulas, weighting factors, grant allocation, and proposals for funds and tuition fees. Concluding comments are provided. (Contains 33 references.) (YKH)

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ECONOMIC AND FINANCIAL CONSIDERATIONS IN THE DEVELOPMENT OF COLLABORATIVE BACCALAUREATE PROGRAMS IN NURSING IN ONTARIO: AN EXPLORATORY INQUIRY

A paper prepared for the Heads of Nursing, Colleges of Applied Arts and Technology & the Council of Ontario University Programs in Nursing

by

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I appreciate the time that so many nursing educators gave to my inquiries and the patience with which they dealt with my questions. I received cooperation from too many people to mention them all here, but special thanks go to Katherine Janzen for help in data gathering, and to Glen Jones for reading and commenting on a draft. The responsibility for the observations, opinions, and suggestions in this paper, of course, rests entirely with me. That includes the very positive words that I have for the initiative and imagination shown by CAAT and university nursing educators in developing the proposals for collaborative baccalaureate programs which I examined. I could not resist these commendations in spite of the fact that it was their organizations which commissioned this paper.

Economic and Financial Considerations in the Development of Collaborative Baccalaureate Programs in Nursing in Ontario: An Exploratory Inquiry

Introduction

I was asked by the Heads of Nursing of the Colleges of Applied Arts and Technology and the universities of Ontario to produce a paper "that would develop an analytical framework for viewing nursing education from an economic perspective" in the context of developing collaborative baccalaureate nursing programs. The intention for the paper was that it would identify key policy issues facing nursing education, indicate how economic considerations might be involved in these issues, and apply these considerations in the explication of models for the future development of nursing education in Ontario.

At the outset, I must acknowledge three important limitations of this report. The first has to do with data. My job was not to develop new data, but to utilize - analyze, interpret, and build upon - what exists. Frankly, I did not find much useful data on key aspects of the issues under consideration. Probably the most important question from the perspective of the economics of collaborative programs is how do costs change when, instead of a CAAT and a university independently and separately offering a diploma and a baccalaureate nursing program respectively, they work together to offer a single program. There are myriad ways of designing collaborative programs, and no Ontario institutions are far enough along the way toward implementation to have actual data on their experience with collaborative programs. Indeed, the proposals for these programs were still being modified during the period of my research. Educators in other provinces who have

traveled further on this route were willing to discuss their programs with me, but not to share information on costs. Further, I was unable to find sufficient information on the costs of current CAAT and university programs to provide a basis for extrapolation of the impact of program reorganization. In addition, the absence of projections of employment for nurses was another substantial gap in the information that would be needed to make even tentative projections of the cost impact of moving toward collaborative programming. What I try to do instead is to indicate the factors that will likely have an impact on costs and provide a framework for examining their impact, along with some speculation on directions of change.

Rather than the hard data which I would have liked, I had to rely mainly upon qualitative data, largely from interviews with postsecondary educators and officials of agencies and organizations related to nursing, including government and hospitals. However, the fact that this field work was done during the summer limited my access to this cadre of experts. There were days, for example, when I sat by the phone all day but managed to have a conversation or arrange an appointment with only one or two of the dozen or more people whom I tried to reach.

The third limitation is that I have no professional expertise in the discipline of nursing. My relevant areas of concentration are the organization and governance of higher education systems, economics of higher education, and higher education policy. There are within these areas of study concepts and tools which are valuable in examining the organizational and financial arrangements for any particular branches of higher education, but there are discipline-specific factors in nursing education which can elude a generalist observer like myself. I try to deal with this potential pitfall by explicating the assumptions and perceptions which influenced my analysis, so that readers

can see how I got to my conclusions, and the soundness of the base upon which they rest. Given the relatively short time for completion of this project, and the fact that the collaborative baccalaureate programs are still at a formative planning stage with most of the details not documented, it is possible that this base contains some factual errors. I hope that these limitations are balanced to some extent by the value in obtaining a view from an outsider to the field.

In carrying out the research for this study, I interviewed, in person or by telephone - and in some cases mainly by e-mail - over fifty people, and read a great many policy and planning documents and articles on nursing education. I have tried to present the information in such a way as to avoid identifying interviewees. Often this prevented me from identifying specific programs. I do not regard this as a significant limitation, because the programs seem to be at a formative stage and the plans for some of them were changing while I was doing my research. For this study what is important are the models illustrated by various proposals, not the particular institutions they are associated with.

I was asked to look at both English and French Language programs in nursing and to be aware of differences between the two. While there are possibly some differences between these two groups of programs overall, I did not detect any significant differences with respect specifically to collaborative baccalaureate programming. In both language groups the same forces seem to have generated the current interest in collaborative baccalaureate programs, and similar proposals for collaborative programs are being developed in both language groups. The things in common extend to curriculum models, for example in both groups there is considerable interest in The Caring

Curriculum. Further, the same kinds of differences between universities and CAATs over admission requirements exist in both sets of programs.

With respect to collaborative programming, the main differences between English and French Language programs seem to pertain to numbers of students and programs and their geographic distribution. The relatively small numbers of French speaking students in some parts of the province may make the potential benefits of collaborative programming even greater for French than for English Language programs. The breadth of distribution of these students may make the use of distance education more imperative in the French Language sector. In that connection, it is of interest that College des Grands Lacs may wish to hook up with College Boreal and Laurentian University in offering a collaborative program in nursing. Another difference between the two languages is related to the small number of institutions offering programs in French. Institutions offering programs in English have potentially more choice in finding partners than do those offering programs in French, though I saw no indication of adverse consequences of this limitation for French Language programs, or that among English Language programs institutions were seeking partners outside their own region.

Part I: The Present Situation and Forces Contributing to Change

The present state of nursing education

Nursing education in Ontario is presently being buffeted by several major forces and consequently is experiencing challenge and dislocation, and will most certainly undergo considerable change within the next few years. The changes in nursing education likely to occur in the last few years of this century will in many ways be greater than those which occurred in the early 1970s when the hospital programs were transferred to the Colleges of Applied Arts and Technology (CAATs). The imminent changes are also likely to be accompanied by more uncertainty and unevenness from one place to another, and more personal insecurity for faculty than those of the 1970s.

There are three major forces propelling change right now. These are the increasing momentum to make the baccalaureate a requirement for entry to practice; changes in the health care system which could have major implications for the role of nurses and for the numbers of job opportunities for nursing graduates; and the budgetary reductions experienced by postsecondary educational institutions in Ontario which have been passed on to nursing (and other) programs.

These forces are highly interrelated, and to a considerable extent reinforce one another. Changes in the way health care is being provided are being determined in large part by the combination of opportunities offered by advances in medical knowledge and technique and increased political pressure to control the costs of health services. At the same time, these very changes in medical knowledge and technique are believed by most observers to necessitate increased levels of education for most health personnel

including nurses, while the combination of changes in the delivery of health services, pressure to control costs, and the increased levels of education of nurses will likely work to reduce the number of nursing positions. In turn, increased levels of education of nurses may make possible as yet unanticipated changes in health care delivery which might also increase efficiency. And the same constellation of economic and political factors which have produced the budget reductions in the health sector have also produced substantial reductions in funding of postsecondary education. The result is that health educators, whose programs overlap these two sectors, find their programs being squeezed in a variety of ways from both sides.

These global societal and sectoral forces appear to be translating into two major imperatives for nursing educators: increase the opportunities for baccalaureate preparation for nursing; and achieve this in the face of continued reductions in funding. Something which could be a mitigating factor in making it easier to reconcile these two imperatives is that total enrolment, that is, the sum of enrolment in basic baccalaureate and diploma programs, is likely to drop significantly in the next few years, for both demand side and supply side reasons. On the demand side, it appears that the number of individuals applying to nursing programs has been declining recently. One likely factor accounting for this is the recent publicity given to lay-offs and reductions in numbers of job opportunities for nurses. Not only might this influence decisions of prospective students, but nursing educators (and government) seem to feel that the prudent reaction to an apparent decline in the need for nurses is to reduce enrolment intakes. Another possible factor which has attracted attention recently is that working conditions in nursing may increasingly be acting as a deterrent to entry to the

profession[1]. It was suggested to me that as nursing increasingly is looked upon as a job for a university graduate, and as opportunities for women in other fields continue to expand, it may be more difficult to attract qualified people into nursing.

The anticipated decline in employment opportunities for nurses, and the decline in the number of new entrants into nursing programs for which the former is at least partly responsible, are important facets of the context of changes in nursing education. It should be noted however that while everyone with whom I spoke expects a significant reduction in the number of jobs for nurses, the evidential basis for projecting the magnitude (and duration) of such a downturn in the nursing labour market is weak. I was unable to locate any recent analyses of the nursing labour market. The only recent projections of nursing employment appear to be one by Human Resources Development Canada (HRDC) in the latest edition of *Job Futures* (Human Resources Development Canada, 1996), and the other an April, 1994 publication of the Ontario Nursing Human Resources Data Centre (Birch and others, 1994).

Job Futures describes the work prospects for nurses in Canada for 1995 to 2000 as "stable" (p. 133). However, HRDC Economists have indicated to me that the nursing labour market appears to have changed since the research for this edition of *Job Futures* was completed, and that this projection may be out of date. HRDC provided me with some data for the Ottawa region showing that the average number of unemployment claims by nurses almost tripled between 1990 and 1993.

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[1]In the most recent national graduate survey by Statistics Canada (1988), significantly smaller proportions of graduates of nursing programs reported that they were "very satisfied" with their jobs than the average for graduates of all other programs. However, higher proportions of nursing graduates were "satisfied" with their jobs (Hiscott, 1994, p. 42).

The other projection study was commissioned by the Ontario Nursing Human Resources Data Centre and carried out by a team of researchers at McMaster University's Centre for Health Economics and Policy Analysis and Department of Clinical Epidemiology and Biostatistics. The purpose of this study was to set out and discuss possible models for forecasting nursing employment, based upon a range of assumptions. Projections using these models were presented for "illustrative" purposes only. Those illustrative calculations show that extrapolation of recent patterns of utilization of nursing services or of expenditures would result in average annual increases in employment of nurses in the range of two to two and one-half per cent per year to the year 2010 (Birch and others, 1994, p. 43 and p. 59). Based upon those calculations, it would appear that rather substantial changes in patterns of utilization and expenditure would have to occur in order for there to be the kind of drastic reduction in the number of nursing jobs that is presently being discussed within the profession.

Those forecasts of drastic reduction are fueled by recent experience of lay-offs and reductions in numbers of positions in Ontario hospitals. Staff at the ONA reported that recently 5,000 nursing jobs have been lost, and they expect another 15,000 jobs to disappear in the near future. That would be a pretty hefty bite considering the total number of nurses employed in nursing in 1994 was just over 81 thousand (Canadian Nurses Association, 1995). Staff at ONA reported also a decline in the proportion of employed nurses working full time, from 60 % in the late 1980s to 52 % currently, and they believe that most of the reduction is involuntary. Such reductions in employment opportunities are consistent with reports of funding cutbacks in the health system and restructuring in the workplace. Nevertheless, however difficult it is to imagine while in the grips of a substantial downturn, not every

downturn is the beginning of a permanent trend. The history of cyclical change in the nursing labour market might suggest the appropriateness of at least a little caution in not over-reacting to the present downturn. It was only eight years ago, after all, that a study of the nursing labour market in Ontario concluded that the output of nursing programs was not keeping pace with increases in the demand for nurses. This theme was captured in the title of the study, *The Shortage of Registered Nurses* (Meltz and Marzetti, 1988).

Still, however long and deep it turns out to be, the decline in job opportunities should certainly give rise to a fall in enrolment in nursing programs. While the anticipated decline in total enrolment in nursing programs is in some ways good news for a field faced with new demands and declining funding, a decline in enrolment usually puts a program at a disadvantage with regard to internal competition for resources within educational institutions. Thus, nursing programs may have a difficult time maintaining the share of resources which they have been getting in their institutions. On the other hand, the decline in enrolment in pre-employment programs could be offset to some extent by an expansion of post-diploma baccalaureate programs for diploma graduates from earlier years who are already in the workforce. As the baccalaureate becomes more expected for employment, there will be both an opportunity and a pressure to increase opportunities for diploma holders to complete a baccalaureate. However, there is some question as to whether the funding for post-diploma programs bears the same relation to the institutional demands these programs make as it does for pre-employment baccalaureate programs.

In response to the increased emphasis on baccalaureate preparation for nurses and budget reductions in postsecondary education, two developments in the CAATs have been most prominent. One has been the closure or

phasing out of some diploma nursing programs; the other has been efforts on the part of CAATs and universities to design collaborative programs in which instruction would be provided by both institutions and which would enable students to graduate with a diploma and/or a degree. To date, program closure decisions seem to have been made by individual institutions with little or no consultation with other institutions. And collaborative program development has taken place on a bilateral or regional basis, i.e. between one CAAT and one university, or among two or more CAATs in the same region with one university. The absence of provincial planning or coordination in the reorganization of the structure of nursing education is noteworthy, but not atypical of the way that postsecondary education in Ontario has been governed for the past fifty years (Ontario Council on University Affairs, 1995). However, when one sees individual program closure announcements in a field which historically has been subject to recurring boom and bust cycles, and for which training facilities cannot be established overnight, one can't help but wonder if some provincial coordination, or - heaven forbid! - planning, might not be warranted.

Any such planning or coordination should be informed by good information on trends in the labour market for nurses, retirement and attrition, and enrolment and graduations. This type of research was beyond the scope of my study, but it is sufficiently important to illustrate the dimensions of the problem. I have heard several nursing educators suggest that a reasonable target for intakes in collaborative university-CAAT programs is about half the sum of intakes in diploma and basic baccalaureate programs in recent years. In the late '80s, these programs were graduating about 3,000 per year (Janzen, 1990, p. 293), but by the mid '90s that number had declined by a few hundred. If we assume that the selectivity accompanying a

reduction in numbers admitted would result in a higher completion rate, then suppose that with a 50% reduction in numbers admitted, the number of graduates might fall to say, about 1,800 annually.

The next relevant question is what is attrition from the nursing workforce? A common figure used for attrition for retirement is 2.5% per year. This assumes a forty year working life and a fairly even age distribution. With many employers now offering early retirement buy-outs, the rate of retirement of nurses in the next decade could be substantially higher than this. However, because of limitations of these pension plans, historically low salaries, and spells out of the workforce, many nurses may not find these retirement packages adequate to enable them to retire. Or, if they do retire from the service of one employer, they may seek employment elsewhere. The upshot is that it is very difficult to predict retirement rates, as is the case with voluntary withdrawal from the nursing workforce. For argument's sake, it would seem that an annual rate of attrition from all causes of 5% is not unreasonable. On a base nursing workforce of about 80,000, that would translate into a loss from attrition of 4,000 annually. In this scenario, the nursing workforce would shrink by 2,200 per year, less the contribution from immigration, in-migration from other provinces, and re-entry into nursing of the approximately 20,000 registered nurses not employed in nursing. Exclusive of these latter sources, there would be a potential reduction of the nursing workforce by 22,000 over the next decade. It would be important to check out these assumptions, but to the extent that the assumptions are plausible, the operative question is whether a reduction of the nursing workforce by about a quarter over the next decade is a reasonable expectation upon which to base enrolment targets.

The baccalaureate and the diploma

As is well known by now to anyone likely to read this paper, in 1982, the Canadian Nurses Association adopted a resolution that by the year 2000 a baccalaureate in nursing should be required for entry to the practice of nursing (the resolution is often referred to simply as "entry to practice"). Since then, almost all relevant professional organizations in Canada have endorsed that position[2]. For a profession as old as nursing to make a university degree a requirement for entry by the end of the twentieth century hardly seems revolutionary[3]. Moreover, this has already happened in several

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[2]Some have done so with more enthusiasm, or more reservations, than others. Later, I comment on the concerns expressed by the Ontario Nurses Association (ONA), the last major holdout. I have heard the ONA's November 1995 statement referred to as a conditional endorsement of entry to practice. That description may be an overstatement. The statement says the ONA "is prepared to support" entry to practice when some conditions are met. However, these conditions are stated in such a general manner that it will be difficult to tell when they are met, e.g. "the needs of Registered Nurses who choose additional education must be met in an educational system which is flexible, equitable, accessible and future-oriented" (ONA, 1995). It is noteworthy also that at the time of the original CNA resolution, the idea of judging an individual's qualifications on the basis of demonstrated competence rather than educational credentials did not enjoy the support that it does today. Were this principle to become fully accepted, the question of what educational credential to require for entry to nursing would be moot. A problem with making competency the criterion for certification, however, is that it assumes an awful lot about our ability to measure competence. Even while making greater use of competency assessment, other professions do not seem to be doing away with educational requirements. Under the *Nursing Act* , in Ontario, new registrants are required to have *either* a diploma or a degree in nursing (College of Nurses, 1995, p. 3).

[3]In making this observation, I am merely noting the common tendency of professions to increase their educational qualifications as they evolve. As an outsider - especially one who was commissioned to examine the economic implications of collaborative programs - it is not for me to judge the merits of requiring a baccalaureate in nursing for entry to practice. All I can do is observe that advocacy of entry to practice implies that the particular combination of practical skills in and orientation toward toward patient care and theoretical knowledge which the diploma signifies are no longer considered adequate for new nurses, in contrast to the particular combination of these qualities which degree holders are expected to possess. There appears to be a strong consensus on this. For example, the concerns expressed in the ONA Statement referred to in the previous note pertain to the situation for current diploma nurses already in the workforce. The Statement does not express concern that the health care system will be impaired by shutting off the flow of new nurses who have the skills, knowledge, and inclinations of diploma prepared nurses. One person whom I interviewed expressed concern about the patient care implications of the professional distance between baccalaureate prepared RNs and RPNs, but this concern does not seem to have attracted attention in the literature on entry to practice.

Canadian provinces. The Executive Director of the College of Nurses noted that seven provinces "are already at various stages of moving towards requiring a baccalaureate in nursing as the educational requirement for entry to practice" (Risk, 1996, p. 3). However, Ontario seems to have been almost convulsed by the proposal for several years, and the agonizing over it goes on.

Recognizing the close connection between professional practice and the corresponding educational programs which prepare people for practice, it would seem that there are two main ways that entry to practice could come about. They differ as to whether the educational sector follows or leads in the process of change of entry requirements. One is to "legislate" the requirement, and thus force the educational sector to adapt. The other is for the educational sector to take the lead, for example, by flooding the market with baccalaureate graduates or ceasing to produce diploma graduates. The second of these two strategies would result in a situation in which the entry to practice reform would be an accomplished fact which ultimately could be recognized by legislating it.

The "legislation" route to entry to practice

Ontario has chosen not to follow the legislation[4] route in regard to this matter. It is not entirely clear just where the authority for legislating this change lies. The majority view of respondents to an October 1995 Discussion Paper put out by the College of Nurses (College of Nurses, 1995) was that "CNO has responsibility to . . . establish the academic level of preparation required for entry to practice . . . " (Risk, 1996, p. 1). However, it is not clear if

[4]The term, "legislation" is used here in the broad sense as a decision imposed by fiat, whether it be by an act of the Legislature, or regulations proclaimed by a ministry or agency which has the authority to do so.

this statement means that CNO has the responsibility to press someone else (like the Ministry of Health) to have entry to practice enacted, or that CNO has the authority to do this itself. One college expressed the view in its response that it was the Ministry of Education and Training (MET) which had the authority to enact the change.

The fact that on a few occasions a statement by a Minister of Health of the government's opposition to entry to practice seemed to close the door for a while would suggest that the authority lies with the Minister of Health. The last such statement seems to have been in 1989, when the then Minister of Health, Elinor Caplan, stated her opposition to making the baccalaureate a requirement for entry to practice (cited in Janzen, 1990, p. 57). Subsequently, for the most part, the Ministry appears to have been conspicuously silent on the issue, giving the impression that the Ministry's position perhaps is not necessarily against entry to practice, but against having the Ministry of Health make the decision.

According to the CNO Discussion Paper, one of the requirements for RN certification is the "successful completion of an approved nursing program" (p. 3). Approved programs include: (i) CAAT programs approved by the Ministry of Education and Training; and (ii) university programs approved by the Council of Ontario University Programs in Nursing. The MET, obviously, has no authority to set educational requirements for professional practice, but it could effectively settle the matter through the use of its program approval authority. For example, it could refrain from approving diploma programs, or approve only collaborative programs between CAATs and universities which award only degrees. However, such a use of the MET's program approval authority could be seen as overstepping its jurisdiction. This concern could be inferred from a statement by a former

Deputy Minister of Colleges and Universities in 1986 that, "Major changes in the educational programs for the preparation of registered nurses would take place only if the College of Nurses decided to make substantial adjustments in standards of practice and registration requirements" (cited in Janzen, p. 56).

Though apparently it has not issued a formal position statement on collaborative nursing programs, the MET's position seems to be that CAAT nursing programs, no matter how integrated they may be with those of universities, must continue to provide a diploma exit. Further, there seems to be another rationale for this position besides respecting the jurisdiction of the Ministry of Health/College of Nurses. This rationale involves the mandate of the CAATs. It is important to consider this rationale, because were the Ministry of Health and/or the College of Nurses to enact entry to practice, this rationale could still pose an obstacle to CAAT participation in collaborative programs.

The argument is that the CAATs' mandate is to produce job ready graduates, and that contributing only a portion of the instruction for which the only educational credential awarded is a baccalaureate degree would conflict with that mandate. A problem in adjudicating any statement about the mandate of the CAATs is that there is no specific text that one can go to which says, "this is the mandate of the CAATs". In discussing the mandate of the CAATs, people tend to refer to a 1966 publication of the Department of Education entitled *Colleges of Applied Arts and Technology: Basic Documents* (Ontario Department of Education, 1966). This publication includes the original amendment to the Department of Education Act establishing the CAATs and the Regulations for the CAATs, but the main description of what could be referred to as the CAAT mandate is in the section which reprints the Statement by the then Minister of Education,

William Davis, when he introduced the legislation. This Statement was made in 1965, before there were nursing programs in the CAATs, and there is no mention of nursing (or other health programs) in the list of programs anticipated (Ontario Department of Education, 1966, p. 13). That in itself suggests that the CAATs have evolved considerably from the vision for them stated by Mr. Davis in 1965.

There has been a fair bit of analysis of the original vision of the CAATs and subsequent interpretations over the years, and there has been some difference of opinion about the mandate of the colleges. It is true that the primary role of the CAATs is to provide training for employment and to produce job ready graduates. However, this is not their exclusive function. For example, the Minister's Statement says that the colleges will be "occupation-oriented, for the most part" (Ontario Department of Education, p. 12). The original legislation made provision for colleges to enter into agreements with universities under which the university would conduct degree programs in the college, and this provision is still contained in the Act.

The mandate of an organization like the CAATs, or its interpretation, cannot be frozen in time, and there was a major review of the CAATs' mandate in the late '80s, entitled Vision 2000. Vision 2000 made an explicit recommendation for a formal statement of the mandate of the CAATs. One of the elements of this statement was: "To work together and with other educational institutions to offer students opportunities for educational mobility and lifelong learning" (Ontario Ministry of Colleges and Universities, 1990, p. 38). Although the Vision 2000 recommendation for a new mandate statement was not formally accepted by the Ministry, it nevertheless gives an idea of the consensual thinking of a representative

group of leaders in the CAAT community and its publics in 1990. Such a statement would seem to allow considerable latitude for the way in which the CAATs might contribute to the education of nurses. Further, Vision 2000 expressed concern about graduates in some occupational areas not being able to realize their full potential without being able to subsequently complete a university degree program, and it recommended that the CAATs work with universities to create opportunities for degree completion. Vision 2000 recommended also the establishment of "combined college-university degree programs, with instruction based at and provided by colleges and universities" (Ontario Ministry of Colleges and Universities, 1990, p. 41). It did not say that these combined programs must also award diplomas.

The Vision 2000 recommendations regarding college-university relationships were referred to the Pitman Task Force on Advanced Training which endorsed them (Pitman, 1993). Subsequently, the then Minister of Education and Training supported the thrust of the Pitman Report and asked that the funding system "encourage sharing and cooperation among universities, colleges of applied arts and technology, and others and not become a barrier to accessibility, adaptation, and restructuring" (Cooke, 1993, p. 3). What I am suggesting is that the mandate of the CAATs, especially if viewed in the context of the strong endorsement which successive governments of different political parties have given to increased collaboration between CAATs and universities, including the establishment of joint programs, is not so narrow as to require that any joint CAAT-university program have provision for awarding a diploma as well as a degree. The baccalaureate in nursing *is* a job-ready credential. It is difficult to see how, in the late 1990s, instruction in the CAATs which feeds directly into

the production of baccalaureate prepared registered nurses could be in violation of the CAAT mandate.

The education route to entry to practice

Be that as it may, and for whatever reasons, Ontario has not elected the legislation route to entry to practice. That being the case, those within the profession who have wanted to advance entry to practice have had to use the educational route. As in any profession, educators are in a key position to initiate change. They are usually opinion leaders within a profession, and education is usually central to changes within a profession. Many nursing educators have stated their support publicly for entry to practice, and I have not seen any statements of educators opposing it - though it would be difficult to tell just how strong the support is among the silent majority.

The main organization to have voiced concerns about entry to practice is the Ontario Nurses' Association. In its November 1995 statement, ONA expressed three concerns: that currently practicing diploma-prepared RNs are "accepted and protected within the health care and educational systems"; that they retain the RN title; and that the educational system provide adequate opportunity for them to attain additional education (ONA, 1995, p. 1). The latter is particularly important, because as the baccalaureate becomes more prevalent among new entrants to nursing, experienced diploma nurses may feel more need or desire to obtain a baccalaureate in nursing.

However, many diploma graduates in the nursing workforce say that they have found upgrading of their academic credentials to be a quite difficult matter, owing partly to family responsibilities and the difficulty of giving up income in order to pursue additional education, and partly due to limited accessibility and other difficulties involved in completing post-diploma baccalaureate programs in nursing in universities. For example, based on a survey of 62 students involved in post-RN programs, the Joint Nursing

Articulation Project reported that "there still appears to be dissatisfaction with assessment of prior learning, the kind and amount of transfer credit afforded, and the course/program scheduling which often conflicts with work/family commitments" (Gerhard and others, 1994, p. 90). The more that nurses feel that post-RN programs are inaccessible to them, the more threatened they are likely to feel by baccalaureate entry to practice. In this connection, Sharon Richardson observed that "By and large, B.C., Alberta, and Manitoba diploma nurses are less vociferously opposed to baccalaureate entry to practice than are RNs in provinces where access to post-RN baccalaureate education is difficult" (Richardson, 1992, p. 4). She goes on to explain how Alberta, particularly, provides extensive opportunities for RNs to complete baccalaureate programs on a part-time basis, by distance, and with transfer credit and credit for prior learning, and has the highest proportion of nurses at the baccalaureate level - about 25% (p. 4).

In round figures, Ontario universities have been graduating a little over 300 a year from post-RN baccalaureate programs. As of 1994, 68,013, or over 83% of those working as registered nurses in Ontario did not possess a baccalaureate in nursing (CNA, 1995). According to figures in Katherine Janzen's dissertation that number was growing by 2,500 a year in the late 1980s, and according to an ONA Fact Sheet, the average annual number of diploma graduates in 1990-1994 was about 2,250 (ONA, n.d.). Recently, it appears that the number of diploma graduates has been declining further, reflecting lower intakes since at least 1991. Preliminary results of a survey undertaken in March, 1996 by the Heads of CAAT Nursing Programs shows that the number of graduates declined by about 17% from 1993 to 1995. The number projected for 1997 is a little over 50% of the 1993 figure, and the projection for 1999 is 42% of the 1993 total. However, the Heads of Nursing

caution that these data are based upon returns from only 17 colleges and the data have not been verified.

Even with a recent decline in the number of diploma graduates and the effort that some Ontario universities have put into their post-RN programs in recent years, the apparent backlog is both staggering and growing. Probably, not all diploma RNs are candidates for post-RN programs, but if they were, at the present rate of output of post-RN programs, it would take over 200 years to bring all the current nursing stock to the baccalaureate level. Of perhaps most concern is the plight of recent and current diploma graduates, who are just beginning their careers, and who, presumably will feel the full impact of the changes in the delivery of health care for which the consensus is that at least a baccalaureate in nursing is needed to cope effectively. If the current rate of output of graduates of diploma programs is only half what it was a few years ago, it would still take four years output of post-RN programs to upgrade the equivalent of one year's diploma graduates to the baccalaureate!

Among educators, those employed in nursing programs in the CAATs have been in a particularly awkward and delicate situation in regard to entry to practice. As members of a profession which has been attempting not only to adapt to rapidly changing societal needs and expectations pertaining to health and wellness and changes in the technology and organization of health care, but also to liberate itself from its historical subservience within a patriarchal structure, CAAT nursing educators can appreciate how the reform may be in the best interests of the profession and the public at large. However, they are also aware that requiring a degree for the practice of nursing puts those who work in institutions which do not have the authority to grant degrees at a considerable disadvantage. There are a variety of arrangements through which CAAT nursing educators can continue to contribute to the

education of nurses of the future, and the central interest of this paper is with those arrangements. However, one thing that they all have in common is that they bring increased employment insecurity to CAAT nursing faculty. Of course, it is possible that, like any major change, new opportunities may result for at least some CAAT faculty, but I think that most see the change as threatening their jobs, their working conditions, and their professional stature as educators. And these seem like realistic fears.

Faced with this dissonance between what they perceive as best for their profession (at least in the long run) and best for themselves (at least in the short to medium run), I find it remarkable that there has been so much support for the change from within the CAAT educational community. I can't think of a comparable example where a large group of educators supported a reform which appeared to run against their own self-interest. Perhaps fortunately, few educators are called upon to make such a choice during their career.

In essence, what I have called the educational, as opposed to the legislative, route to effecting entry to practice involves substantially increasing the opportunities for new entrants to obtain a degree, so that increasingly a greater proportion of new entrants possess the baccalaureate. One way of doing this is through formalizing articulation arrangements between CAAT and university nursing programs, so that the curricula of the two institutions mesh better and students from the CAATs are more readily accepted for subsequent study in a university, and get more credit for their studies in the CAAT. Six years after the CNA resolution, there had been little development of articulation arrangements for nursing in Ontario. A 1988 survey undertaken for Vision 2000 identified three articulation agreements in nursing, each involving one CAAT and one university, one very narrow in

scope, and one of them with a university in the United States (Marshall, 1989). The absence of formal articulation arrangements was significant in view of the observation in the Pitman Report that "[f]ormal articulated arrangements between colleges and universities result in more efficient and generous opportunities for students" (Pitman, 1993, pp. 139-140).

Apparently more attention was given to articulation over the next six years, although not necessarily in the form of formal articulation agreements between CAATs and universities. The first Ontario Transfer Guide, published in 1994, gives entries for transfer arrangements in nursing for seven to ten universities for almost every CAAT (Ontario Ministry of Education and Training, 1994). However, the brief comments in the Transfer Guide seem merely to state institutional policy rather than reflect the outcomes of new articulation agreements, e.g. "Graduates will be considered for admission to the Bachelor of Nursing Science with advanced standing in up to 5 transfer credits" (Ontario Ministry of Education and Training, 1994, p. 98). A survey of CAATs and universities done by the Joint Nursing Articulation Project in the same year collected information on institutional policies for the award of transfer credit (Gerhard and others, 1994). The JNAP also elicited perceptions of diploma nurses who indicated "that the current system of articulation does not meet their needs" (Gerhard and others, p. 90). However, the questionnaire did not ask about the existence of formalized articulation agreements, so it is impossible to tell if student needs were better met in situations where there were formalized articulation arrangements between a CAAT and a university.

In its review of "recent changes in Ontario", the JNAP itemized initiatives then being planned which involved studies in the CAATs contributing to an Ontario university degree in nursing. The report identified

six initiatives involving six universities and nine colleges. Three of these initiatives were described as collaboration, one as articulation, and two as both collaboration and articulation (pp. 37-38). In its recommendations, the JNAP recommended that the collaborative model be adopted as the most appropriate for Ontario (p. 99).

Even before the Joint Nursing Articulation Project, the heads of CAAT and university programs in nursing had been meeting together regularly to discuss what was needed in nursing education of the future. Building upon these meetings, a Provincial Steering Committee, consisting of representatives from the CAATs and universities, was established in 1992. Through a broad consultative process, it produced a position statement on Education of the Nurse of the Future in February 1994. This position statement has been endorsed by the Council of Ontario University Programs in Nursing and the Heads of Nursing in the CAATs. The statement calls for there to be "one educational system for nurses with programs developed and implemented on a regional basis" (Provincial Steering Committee on the Future of Nursing Education, 1995, p. 1). Further, it calls for the use of a collaborative model which "capitalizes on the combined resources of college and university programs and hospital and community clinical agencies - building on the strengths of all partners" (p. 1). It takes a stand for the baccalaureate for entry to practice, but accepts the need for an optional diploma exit during a "transition period", at the end of which all new registered nurses would be trained at the baccalaureate level. The length of the transition period is unspecified, except to say that it would be "regionally determined".

The agreement of institutions from the two postsecondary sectors on the educational arrangements for nursing is noteworthy for at least two

reasons. First, in spite of exhortation from Vision 2000, the Pitman Report, and Ministers of Education and Training, for CAATs and universities to work together in areas of mutual interest which would benefit students, this agreement in nursing education is the first province-wide agreement on inter-sector cooperation of such a scale, or possibly at all. Second, in the context of the distinction which was made earlier between the legislative and educational routes to dealing with entry to practice, here is an example of educators coming together to take initiative to unlock an apparent stalemate, rather than waiting for authorities to make a decision. In contrast to the frequently heard allegation that coordination between programs of postsecondary institutions, even within the same sector, is almost impossible to bring about, here there seems to be a case of institutions themselves simply asking to be allowed to get on with such coordination. As for the content of the agreement, one might question whether there is a contradiction in saying that there will be *one* system, but that it will be developed and implemented on a regional basis, or whether it is feasible for the length of the transition periods to baccalaureate for entry to vary by region. However, in a province where there have been two solitudes in postsecondary education, the PSC statement seems a remarkable accomplishment, and one which is worthy of notice by other fields.

The centerpiece of the statement is the collaborative model of nursing education. Before going on to examine how this model is being developed in practice, it is useful to spend a moment on the term, collaborative - and the related term, articulated.

Collaborative and articulated programs

In the late 1980s, a genre of initiatives in nursing education which was called collaborative programs began to appear in Canada. The first such programs in Canada were implemented in British Columbia in 1989, involving the University of British Columbia and Vancouver General Hospital (Grenier and Dewis, 1995); and the University of Victoria and four community colleges - Camosun, Okanagan, Cariboo, and Malaspina (Hills and others, 1994). About the same time as these programs were being developed, similar developmental work was being done at Laurentian University and Cambrian College. That the Laurentian-Cambrian proposal did not get off the ground while those in B.C. did is thought by many nursing educators in Ontario to have been the result of different stances taken by the governments of the two provinces toward such initiatives. Indeed, those involved with the UBC-Vancouver General Hospital program reported that because of the "sudden and rather unexpected" approval of the program by the provincial government, they had to implement the program much more quickly than they had wished (Dewis and Grenier, 1993, p. 1017).

In the context of nursing programs, the term, "collaborative" is used in different ways by different authors, with few, if any, offering a precise definition of the term. In practice, the term is used in two distinct senses. One is to refer to the mutual involvement of educators from both community colleges and universities in the planning and design of the program. The other is to refer to certain structural characteristics of the resulting program. For example, the latter seems to be what the Joint Nursing Articulation Project had in mind when it defined "The Collaborative Model" as one of nine models of articulation between community college and university

nursing education (Gerhard and others, p. 22). The JNAP stated that the collaborative model "involves cooperative education given *jointly* by colleges and universities" (p. 22, my italics). But then the Report goes on to urge that the process of choosing one of these nine models of articulation "should involve collaboration by nursing personnel from the colleges, the universities, and the community" (p. 23).

The benefits of the latter type of collaboration have been stressed by those who have written about the experience with new programs involving both community colleges and universities (Richardson, 1992; Dewis and Grenier, 1993; Grenier and Dewis, 1995; Flynn, 1996). These authors note some of the barriers to this type of collaboration, including the ordinary inertia which keeps institutions from cooperating with one another, and the status and power differential between the two postsecondary sectors. Dewis and Grenier reported that the decision for the parties from different institutions to work together involved a high degree of risk and uncomfortable feelings, but that the collaboration resulted in substantial benefits for the program (Dewis and Grenier, p. 1021). Similarly, a study by Flynn emphasized the importance of substantive collaboration between members of participating institutions (Flynn, 1996, pp. 45-46).

As to the other meaning of the term collaborative, it is often used in a way that is synonymous with "integrated" or "joint" (and sometimes "conjoint"), in contrast with "articulated". Introducing the term "articulated", of course, possibly invites another element of linguistic confusion, because it too (including the term "articulation") is used in different ways. I have already noted that the JNAP Report uses articulation in generic manner to include collaborative (in the second sense in which I have defined it) as one of nine subspecies. Others follow the opposite tack. For

example, Richardson refers to an articulated model as a subspecies of collaborative programs (Richardson, p. 2).

The term articulation has a much longer history than does the term collaboration in discussion of connections between community colleges and universities. Articulation is associated with the concept of transfer, and for many, harkens back to an era in which the barriers between community college and university programs were greater than they are now. Working within a traditional articulation/transfer paradigm, it was difficult for students completing a program in the CAATs to negotiate an effective transition to the corresponding university program. Moreover, the traditional articulation model has been criticized for the lack of fit between community college and university studies. Gallop, for example, has argued that in the articulation model, the upper level program (university) has to adjust to the lower level program (community college), and that in the process of doing so, "the quality and integrity of the baccalaureate program may have to be compromised if it is to fit the lower level educational experience" (Gallop, 1984, p. 59).

Of course, others have had just the opposite concern than Gallop's, namely, that because of the university's greater power and prestige, the lower (or other!) level may have to be compromised in order to fit the requirements of the university. As a general principle, that is why the CAATs were designed originally to be quite separate from the universities (Skolnik, 1989, p. 1; Skolnik, 1995, pp. 440-442). In any event, in the usage of these terms within the culture of nursing education, especially in Ontario, the term articulation has acquired some negative connotations of ill-fit, or force-fit, between programs of different sectors, while the term collaborative has come to have generally positive connotations of people working together

expeditiously to accomplish good things. These connotations are a barrier to use of either term in a neutral way.

With those qualifications in mind, I will use the terms in the following way:

Collaborative Baccalaureate Program: A program in which some or all of a student's program is delivered by a CAAT, the student has the opportunity to obtain a degree upon completion of the program, and the planning for and design of the program is done jointly by staff of a CAAT, or CAATs, and a university, or universities working together.

In this definition, there are three fundamental features of a collaborative baccalaureate program. Obviously, as the name suggests, it must be possible for the student to obtain a degree upon completion of the program. Secondly, at least a portion of the program must be delivered by a CAAT. If the program is delivered entirely by a university, but the university contracts on an individual basis with some CAAT faculty to provide instruction or supervision, that would not meet the above definition of a collaborative baccalaureate program, as there would be no *institutional* collaboration. In most cases, the university would also deliver part of the program. The reason why there is no reference in the definition above to the university also delivering part of the program is that a university may contract with a college to have the program delivered wholly by the college under terms and standards agreed to by the university, and subject to the university's quality control procedures. It appears that there is at least one case in Canada of a collaborative program being delivered in this way. Thirdly, of course, the definition makes explicit the idea of collaboration between college and university personnel in the planning and design of the program. In addition to these three properties, the definition draws attention to some of the

important options in designing a collaborative baccalaureate program: how much of the program is delivered by (and in) the CAAT, and how the contributions of the CAAT and university are structured.

Among collaborative programs, as defined above, there are many variants in design. Indeed, none of the programs that are in existence in British Columbia, Alberta, Saskatchewan, Manitoba, or at the planning stage in Ontario look identical. With more experience of these programs, and more detailed information on them, it might be possible to develop a finer classification of program types. However, for the present, the following distinction seems about as far we can usefully go in that direction, that is a distinction between articulated and integrated programs:

Articulated Collaborative Baccalaureate Program: one in which the first part of the program is delivered by a college, and remaining part is delivered by a university .

Integrated Collaborative Baccalaureate Program: one in which, from the beginning, the program is delivered by a college and a university together, that is, different instructional activities are provided by each type of institution.

The most common example of an articulated program is the "Two-Plus-Two" (TPT) model. In this model, the college provides the first two years, at the end of which the student elects either the degree stream which takes two more years, in a university, or the diploma stream which takes one more year, in a college.

A third possibility is a hybrid of these two. In the Hybrid Model, there is a distinct first part of the program which is delivered by the college, and a second part by the university, but the university may have limited involvement in the first part and/or the college in the second part. A

proposal that has been approved by one Ontario university and community college provides an example. In this case, students can enrol in either the college or the university. The curriculum is almost identical for the first two years in each institution, even down to both institutions using the same course numbers. The only difference in course content in Year 1 is that the college students take two additional courses, both in communications. The difference in Year 2 is that those college students who opt for the diploma take additional courses at the end of the year which the university stream students don't take until third year. This is so that the college students who opt for the diploma can complete it within three years. The college students who opt for the baccalaureate join the university stream students at the beginning of Year 3.

For the students who start in the college and finish in the university, this model looks like a Two Plus Two as there is a definite structural divide between the first two years when the students are at the CAAT and the next two when they are at the university. However, the plan calls for the college students to take four of their half courses at the university in each of the first two years. Also, it is anticipated that there will be some cross-teaching by faculty between the institutions. Thus, the program has characteristics of the integrated model as well as of the articulated model. Hence, it can be seen as a hybrid of the two.

This model is of interest also, because the curriculum plan is spelled out for how students who complete the diploma can go on to complete the baccalaureate should they choose to do so. In order to meet the diploma requirements for hours of various types, especially of practice, these students cannot do all the courses that those who do not opt for the diploma do in third year. Because some third year courses are prerequisites for fourth year

courses, it is impossible for the diploma students to complete the baccalaureate requirements in just one year after the diploma. They need two academic years, although they would have time for part-time employment during those two years - and they could become qualified to work as an RN during those years by virtue of their diploma. These students would end up doing two preceptorships, one for the diploma, and one for the degree. At present, the plan is for these "diploma plus baccalaureate" students, in what is effectively their fourth and fifth years, to be melded in with the baccalaureate students in the latter's third and fourth year courses. While the educators feel that they have had to plan for students who do the diploma and degree in sequence, they anticipate that almost no one may take that route.

It may be helpful to cite one other example. This is of a college and a university which have planned an integrated program in which the college and university will jointly deliver the four year baccalaureate curriculum, using the faculty and premises of each institution. All students will be registered in the university and take the same courses for the first two years. Then those, if any, who opt for the diploma will switch over to the college for the third, diploma, year. So far as the baccalaureate is concerned, this is clearly an integrated model - with a diploma option.

In considering the economic and financial implications of collaborative programs - as well, of course, as other implications, such as accessibility - it matters whether the program is of the integrated or articulated type. Accordingly, in the next part of the paper, I will distinguish between those types where that is an important factor.

Part II

Examining Major Policy Options from the Perspective of Impact on Costs and Funding

The purpose of this part of the paper is to look at major options and variants in the design of collaborative baccalaureate programs in nursing from the perspective of their likely implications for costs and funding, and briefly as well, certain other outcomes of interest, such as accessibility. It must be stressed that because of the absence of relevant data, this exploration will be largely conceptual and speculative. These limitations exist not merely because the necessary data are impossible to obtain, but more fundamentally because the types of programs that are the subject of this study are still at a formative stage of planning. Thus, not only is there is no experience which can serve as a basis for inductive generalizations about relationships, for example, between various design factors and costs; but, from what I have been able to ascertain, the details of program design have not been worked out sufficiently to know precisely how the programs will be implemented.

Nevertheless, in the first section of this part of the paper, I will enumerate the program design options which seem likely to have the greatest impact on costs and other outcomes of interest and offer some comments about those likely impacts. The next section will consider funding issues, and offer some proposals for funding arrangements.

Section A: Impacts of Selected Factors on Costs

In an environment of ever tighter fiscal conditions for postsecondary education in Ontario, one of the most important questions about a major reform or restructuring of a field of education is how that will affect the costs of education. The particular concern in this study is how the costs will change in moving from a situation in which a college offers a diploma program and a university offers a baccalaureate program to a situation in which the two (or more) institutions work together to offer a baccalaureate program, and perhaps a diploma program as well. The most cautious - and certainly accurate as far as it goes - answer is, "it depends". In this section, I try to be somewhat incautious, and say not only what it depends on, but how. What follows is a list of key design variants with accompanying commentary.

1. Length of time that it takes students to complete the diploma and/or degree

My understanding is that in all variants of a collaborative baccalaureate program being considered, it would require three academic years to obtain a diploma. That is the typical situation at present, so there would be no change from the present nor difference among new programs.

With respect to the degree, the story is different. Presently in Ontario, a student who starts a nursing program in a CAAT likely has the expectation of completing a diploma. For a student who wishes to continue on to complete a degree right after completing a diploma, there is considerable variation in the time required, depending upon the college which the student attended, the university he or she goes on to, and possibly the characteristics of the individual student as well. My understanding is that under present

circumstances it would be most likely to take five years, perhaps even more. What the collaborative baccalaureate programs offer the student who starts in a college is an opportunity to complete a degree in four years. Usually this involves bypassing the diploma[5]. So it appears that for most students who begin their studies in a CAAT, there will be a saving of at least one year in the time that it takes to obtain the baccalaureate.

Variation in the length of time that it takes for a student to complete a degree may not account for substantial variation in costs to the institutions providing the program. The same costs might just be spread over a longer or shorter time period. However, for students, this is the largest source of difference in costs. To complete a degree in one year less could mean benefits to students in the order of $30,000 or more, depending upon starting salaries of baccalaureate nurses.

2. Providing a diploma exit

This is a controversial and possibly costly program option. The question of how different a program has to be in order to incorporate a diploma option from how it would be designed if a baccalaureate were the only credential awarded is not an easy one to answer, nor one for which there appears to be a consensus. The operative question is whether in order to satisfy the requirements for the diploma the program includes courses and

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[5]There seems to be considerable variation in the conditions under which students who take the diploma option can subsequently complete a degree. Frequently in existing programs, they are not eligible for re-entry into the collaborative baccalaureate program, but must enrol in a post-RN baccalaureate program. However, Richardson reported that in the University of Manitoba/Winnipeg Health Sciences Centre Program, students who take the diploma exit and later wish to complete a degree may re-enter the collaborative program at the fourth year. This would suggest that these students can complete both a diploma and a degree in four years (Richardson, 1992, p. 3).

other learning experiences which would not have to be included were it not for the diploma. In addition, altering the sequencing of courses in order to ensure that students meet all the requirements for the diploma in three years may add to the cost of a collaborative program.

The biggest - and most questionable - cost factor arising from having the diploma option is the additional cost for the educational system and the student of having persons do both the diploma and the degree! For the student who goes straight through and completes both, this will likely involve five years worth of use of college and university resources and of the student's own time instead of four. That is at least a 25% additional cost for the nursing education system, and probably an even greater additional cost for the student since their opportunity is higher later when they are older and have greater skills and knowledge. In view of developments in the nursing profession and workplace outlined earlier in this paper, it is probable that most diploma graduates in the future will feel a strong need to complete a baccalaureate before long. Post-RN enrolment is probably even more costly than the straight through diploma plus baccalaureate, especially for the nurse who is already in the labour force.

As I noted earlier, the number of applicants and admissions to diploma programs in Ontario has been declining. In one collaborative program in Alberta, of the first 197 students who reached the point where they could exercise the option for degree or diploma, I was told that 195 opted for the degree. There is no reason to believe that the experience in Ontario would be substantially different. In that case, the need to maintain an infrastructure for the diploma in spite of the small number of students completing it could make the cost per diploma quite high.

The impression of educators in Alberta with whom I spoke is that the reasons why a few students have opted for the diploma were financial, that is they felt able to finance only one, not two years of study after Year 2. This is a serious problem, especially as Hiscott has shown that community college nursing students are substantially more prone to borrow for their education, borrow more on average, and have a harder time paying off their loans than the average for students of all other programs (Hiscott, n.d.). The percentage of 1986 graduates for whom education debt was more than 10% of their gross employment income two years after graduation was 46% for community nursing graduates, compared to 36% for other community college graduates, 32% for university nursing graduates, and 38% for other university graduates (Hiscott, n.d., p. 16). With generally increased fees, having to do four instead of three years may pose a barrier for some of the traditional clientele of college programs - even if the ultimate economic returns to that fourth year are substantial. This is the best, indeed, the only reason that I can see for retaining the diploma. The question is whether this is a good enough reason to retain it, or if there might be other ways of addressing the problem of financial barriers to a fourth year of study.

Finally, it should be noted that there is a possible trend in university health sciences education which could make the diploma option unfeasible or irrelevant in situations where a collaborative model is employed. This is the possible move in some universities toward a common first year for all health science students. In this case, students would not begin nursing courses until the second year. It is too early to tell, but it may be that all the nursing courses common to the diploma and baccalaureate could not be completed until the end of the third year. It might work out that students could not branch off to do the diploma until the fourth year, but as they could

alternatively complete the baccalaureate in fourth year, it would not make sense for anyone to do the diploma.

3. Whether to have parallel diploma and/or degree programs

Consider a situation in which a university and a CAAT have decided to join forces to develop a collaborative baccalaureate program. One choice facing each of them is whether to put all their eggs in this basket, or for the CAAT to retain a separate diploma program and/or the university to retain a separate degree program. Maintaining separate programs likely adds to administrative overheads and prevents taking advantage of potential economies of scale. It may result in proliferation of course sections of less than efficient size.

It is hard to imagine a rationale for the CAAT retaining a separate diploma program, since the main point of developing the collaborative program is to remedy the present problems of lack of articulation between diploma and degree programs. However, I can think of two possible reasons for the CAAT wishing to maintain a distinct diploma program. One is if the admission requirements in the collaborative baccalaureate program are set in such a way as to make ineligible many of the traditional clientele of CAAT nursing programs. The other is, depending upon the funding arrangements for the collaborative program, to ensure an adequate financial base for the nursing education unit in the CAAT. In addition to these two reasons, some CAAT educators have stated that they believe that having separate streams is required by the Ministry of Education and Training as a condition for Ministry funding of the CAAT portions of collaborative programs. I will address the funding question in the next section of the paper.

As to the admission requirement issue, there are models for collaborative baccalaureate programs which resolve what has been a bone of contention between CAATs and universities arising from their different missions[6]. The TPT Model, for example, overcomes this problem quite handily. Students may be admitted to the first two years on the basis of traditional CAAT requirements, and then admitted to third year on the basis of their performance in the first two years. In fact, in one Ontario case where this type of model is being developed, admission to the third year will be determined on the basis of students achieving specified outcomes in the first two years.

By contrast, in the integrated model students effectively enter immediately into a baccalaureate program. As such, the normal university admission requirements apply. In some cases, discussions between a CAAT and a university aimed toward developing an integrated collaborative program have hit a stalemate over differences of opinion about admissions requirements. Both sides' positions are understandable within their own contexts. The universities have been reluctant to alter their requirements for six OACs, and the CAATs have been unable to agree to a requirement which might conflict with their mandate and disqualify many of their traditional nursing program clientele. Also, given the long tradition of nursing being a major avenue for upward social mobility, restricting that path would be a gesture of considerable social significance. On the other hand, perhaps this

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[6]Although it is often portrayed as simply a function of differences between the missions of CAATs and universities, the disagreement about admission requirements may reflect differences about qualifications needed to succeed in a baccalaureate program, collaborative or otherwise. One interviewee observed that even among students with the requisite OACs in science subjects there are many failures in university Anatomy and Physiology courses. This interviewee feared that the failure rate would be even higher among those without the required OACs. Other interviewees stated that many students presently in diploma nursing programs could meet university admission requirements, but the issue, of course, is whether this should be an admission requirement for all students entering collaborative programs.

traditional function of nursing education is less compatible with the role that nurses will be expected to play in the future.

A compromise on admissions in at least one proposal is that applicants who lack the necessary qualifications from secondary school would do make-up courses at the CAAT in order to qualify for admission - in the way that many CAATs have enabled students to qualify for other university programs by taking courses in CAAT General Arts and Science Programs. This, however, could add an extra year for these students, and it is not known how much of a deterrent it would be to prospective students who lack university admission standing. An interesting variant of this proposal is one in which entrants who meet some but not all university admission requirements would be able to take some degree credit courses simultaneously with upgrading courses rather than having to wait until they have made up all the university admission requirements before taking any degree credit courses. If the details of this proposal can be worked out satisfactorily it would seem promising because it is so much in keeping with the spirit of the integrated model. The fact that some students would not initially meet full university admission requirements could be a reason for the university maintaining a separate university stream in addition to the collaborative program stream.

A particularly interesting and important case under this issue of maintaining a degree program that is distinct from the collaborative baccalaureate program relates to post-RN programs (or post-diploma programs). My understanding is that post-RN programs, for diploma graduates of earlier years, are organized and administered differently from basic baccalaureate programs in the same institutions[7]. However, with the

[7]This is a different understanding than that obtained by Lowson (1986) in her survey of Deans of university nursing programs. Lowson reported that almost all post-RN programs were

development of collaborative baccalaureate programs, the possibility arises for integrating the post-RN program with the collaborative baccalaureate program. This would seem particularly feasible with the TPT, as fairly recent diploma graduates may have very similar backgrounds to those who have completed the first two years of a collaborative TPT program.

4. The extent of integration between institutions

One of the potential benefits of collaborative programs is the ability to combine the students from two or more institutions into courses or other learning situations which might enable more efficient use of resources. Two recent developments make the exploitation of potential economies of section size more important. One is declining total enrolment in nursing programs. The other is the rapid and substantial change in nursing curriculum in recent years which has necessitated the expenditure of considerable effort on curriculum review and reform. Program integration enables these development costs to be amortized over a larger number of students.

Determining the optimal section size for various learning experiences is difficult, so it is not possible for me to offer specific guidelines here. In general, the potential benefits of integration are greater for institutions with smaller enrolments. However, those institutions tend to be more geographically separated, so the potentialities of distance education have to be considered as well. In the case of French Language programs, the numbers of students in most locales may be so small as to make integration of activities between the CAAT and a university with a French Language program

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integrated with the corresponding basic baccalaureate programs (Lowson, 1986, pp. 134-135). Perhaps the situation has changed in the more than a decade since Lowson's research.

especially attractive from a financial point of view. Besides integration of instructional activities between a university and a CAAT, integration between institutions of the same sector may be of benefit. For example, where two or more CAATs are working with a university, there may be certain courses which are delivered by a single CAAT, either in a distance technology mode, or by a traveling instructor - or in a region like Toronto which has many CAATs, by students traveling between CAATs or to a common site. While the integrated model would seem to offer the greatest potential for combining students from different institutions into efficient size sections, within the TPT there is a possibility for CAATs to combine resources for first and second year courses. Adopting features of a hybrid model also enables the combining of college and university students in sections within the framework of a TPT model.

5. Specialization by institution

In addition to offering the potential for combining students from different institutions into efficient size sections, collaborative programs also present a possibility for efficiency gains from institutional specialization. An example is in articulated programs, such as the TPT, with the CAAT specializing in the delivery of the early part of the baccalaureate curriculum (i.e. the first two years), and the university specializing in the later part (i.e. the last two years). This type of division of responsibility may have natural advantages for the university because of the complementarity between later years of baccalaureate teaching and research, whereas such complementarity is much weaker or non-existent in the earlier years (Begin-Heick and Fenton, 1994). Of course, graduate studies have even a stronger complementarity with

research than third and fourth year undergraduate studies, but these three activities - advanced undergraduate teaching, graduate teaching, and research - have much more in common with each other than they do with first and second year studies. The TPT allows the university to concentrate on these activities which are wholly or primarily in the domain of the university. Given the relatively small proportion of Ontario nurses with Master's (1.04%) or Doctorate (0.10 %) degrees in nursing (College of Nurses of Ontario, 1996), this is no small consideration. Achieving a substantial increase in the numbers of baccalaureate prepared nurses will necessitate a considerable increase in the number of nurse educators with more advanced degrees. There are also many in the profession who believe that with the increased complexity and sophistication of nursing practice, there will be a corresponding trend toward employing individuals with graduate degrees in nursing in supervisory positions. In an era when public institutions are exhorted not to try to do everything, the fact that only the university can provide post-RN and graduate education in nursing, while the CAATs can provide the first two years of baccalaureate programs might be something to ponder.

6. The cost and utilization of resources in different sectors

If the cost per unit of instructional services differs systemically between the CAAT and university sector, then the relative use made of staff from each sector could have a significant influence on the costs of a collaborative program. This is an area that has not been adequately researched, indeed hardly researched at all. The conventional view is that the cost per unit of service is higher in the university sector because university salaries are

higher and teaching loads are lower. However, this impression is hardly the basis for a definitive conclusion. While it is true that university salary scales go up higher than those of the CAATs, it is where people are on those scales that matters. A high proportion of CAAT nursing faculty may be at the top of their scale, while in the universities there may be a wider distribution of actual salaries. Further, the workload formula in the CAATs works to limit section size, while there is no such constraint in most universities. Then there is the issue of allocation of faculty salaries between teaching and research. The conventional view to which I referred earlier in this paragraph attributes the full salary of a university instructor to teaching, but that is an arguable proposition. Another factor which needs to be taken into consideration is the use of part-time instructors in both sectors. One would need to consider how the use of part-time instructors compares between corresponding programs in the two sectors, and the differences in rates for part-timers in the two sectors. It has been suggested to me that the CAATs typically pay lower rates than universities to part-time instructors, and for that reason in a collaborative baccalaureate program which uses the integrated model, much of the clinical instruction will likely be done by the CAAT partner. On the other hand, it is likely that there are fewer collective agreement constraints on the use of part-time instructors in the university than in the CAAT sector.

One can expect administrators who are under severe financial pressure to give some weight to sectoral differences in staffing costs, other things being equal, in deciding on the allocation of functions and responsibilities between institutions. However, the question of when other things are equal is a difficult one. Is taking a course with exactly the same curriculum content in a university or in a CAAT an equivalent academic experience? This is part of a

larger question of whether "a program is a program" regardless of the institution in which it is delivered. In the context of collaborative programs, this question has important financial implications which I will discuss in Section B.

7. Articulated vs. integrated programs

In the discussion above I have made some observations on how the impact of various cost factors would differ between articulated and integrated programs. Because of the variation within each of these categories and the absence of detailed information on program design and relevant data, it is impossible to offer any generalization about the relative cost of the two models. In general, the articulated model brings the benefits of institutional role specialization, while the integrated model has the advantages resulting from sharing resources and bringing students together into larger sections.

Other factors than sheer financial ones are likely more important in choosing between these two models. The articulated model seems better than the integrated one for maintaining accessibility. In the integrated model, there has to be a single set of admission requirements, and the universities do not appear to be willing (or perhaps, able) to compromise the present OAC requirements. This may exclude most of the current clientele of diploma programs. The articulated model enables this group to be admitted to the program and do the first part of their studies in a CAAT, and if they perform adequately in that part, to move on to the university portion of the program.

The articulated model also would seem to give more support to accessibility from a geographical perspective. The "natural" setting for an integrated model is where a CAAT and a university are in the same

community. Even in this setting, the experience of integrated programs in other provinces is that faculty and students find the travel between institutions onerous. If the integrated model was to take over, this could severely restrict accessibility for individuals who reside in communities which do not have a university - which is the majority of locales where diploma programs presently exist. The articulated model would thus seem to be the preferred model for situations in which distance from the nearest university with a nursing program is an issue. Of course, there is a possibility that the distance barrier in the integrated model can be overcome through the use of off campus instruction and distance education technology. However, it is my impression that in general, distance education has not resulted in the equalization of educational opportunities between metropolitan regions and more distant communities in Ontario - although there are some exceptions to this generalization, such as the excellent arrangements for distance education for students of College des Grands Lacs.

Finally, the articulated model is likely to provide greater stability for nursing education in the CAATs. In the articulated model, the CAATs have a defined and easily understandable role, e.g. providing the first two years of a four year baccalaureate program. This is a role which once adopted is likely to be fairly secure within a college, and one which the university is not likely to wish to take back as it becomes more focused on graduate studies and research. In the integrated model, the CAAT role will likely be less definable and possibly vary from year to year. These qualities could result in the CAAT role in nursing education being marginalized and being at the top of the list of activities for the CAAT to jettison in response to financial exigency or a felt need to streamline operations. In such a scenario, it is easy to imagine the integrated model as a transition to a situation in which all nursing education

is concentrated in universities, or in communities which have universities. There are those who think that this would be a good thing, and purely from the perspective of professional education there are arguments which could be made for it. However, those arguments must be balanced against concerns for broad accessibility, and for the valuable role that a centre for nursing education plays within a community in regard to professional development, and providing leadership in the local professional and health communities.

Net Effects of Factors Influencing Costs

Having explored some of the major influences on costs of collaborative baccalaureate programs, the question arises as to whether it is possible to predict the net effect of the movement to collaborative programming on the costs of nursing education. If one were to have all the precise details of implementation of a particular collaborative program, and factual information on all the issues raised in this section, for example on the comparative unit staffing costs of the two sectors, it might be possible to take a stab at this question. However, neither type of information is available. Moreover, the question posed at the beginning of this part of the paper suffers from one very problematic complication not yet mentioned. This is an apples-and-oranges complication. The present situation consisting of a mix of independent diploma and baccalaureate programs differs from the possible future situation of collaborative baccalaureate programs in a very major way in regard to the output mix of diploma and baccalaureate graduates; what is at hand is a change from a mix that has involved several times more diploma graduations than degree graduations to one which would consist mainly of degree graduations.

It is important to distinguish between the impact on cost of a shift in the mix between baccalaureate and diploma outputs, and the impact on the cost of producing baccalaureate graduates. Just the fact that the degree takes longer to produce than the diploma will mean that a mix which has a much higher proportion of degrees will be more costly than one which has a much higher proportion of diplomas. Also, depending upon how the collaborative programs are implemented, it is likely that there will an increase in the amount of instructional activity provided in or by universities, even with overall enrolment in nursing declining. For example, if enrolment in diploma programs declines by 50%, and the remaining 50% is converted to collaborative baccalaureate programs in which a substantial portion of the curriculum is delivered by a university, then the net demands on the resources of the university could increase substantially. Such an increase in the demand on university resources was in fact recognized by the Alberta Government which provided a grant to the University of Calgary for facilities expansion in conjunction with the development of its collaborative program with Mount Royal College and Foothills Hospital.

A more relevant comparison than that between the total cost of nursing education before and after the introduction of collaborative baccalaureate programs is that between the cost of independent basic baccalaureate programs that have been part of "the before" landscape and the cost of the collaborative baccalaureate programs that are proposed. Given all the opportunities for making the most effective and efficient use of the combined resources of the two sectors, through the strategies which have been described in this section, it would seem almost certain that the collaborative programs would be more efficient for producing baccalaureates than the existing basic baccalaureate programs. Indeed, one university

program head suggested that the major stimulus to the establishment of collaborative programs was not baccalaureate entry to practice per se, but budgetary pressure which has forced institutions to find more economical ways of delivering programs, and inter-institutional collaboration is a potentially important avenue for finding such economies.

There is one important caveat, however, beside any generalization about the superior efficiency of collaborative baccalaureate programs. This has to do with the very substantial costs necessary to administer a collaborative program. In effect, one is trying to manage two institutions as if they were a single institution but without the governance structures and control mechanisms that facilitate, however imperfectly, the running of a postsecondary educational institution. As an example of these difficulties of inter-institutional coordination, I have been told of cases where joint CAAT-university programs in other disciplines have been in operation for quite some time, but it still has not been possible to solve something as apparently rudimentary as student parking problems. In these cases, students who spend half the week at a CAAT and half at a university still have to pay full-time parking rates at both institutions, in spite of repeated efforts by program administrators in both institutions to obtain more sensible parking arrangements for the students.

Administrators of collaborative nursing programs in other provinces which have been running for a few years indicated to me that the ever present need for on-going inter-institutional coordination was one of their major problems. They reported that a great deal of time and energy must go into such coordination if the programs are to be successful. To a considerable extent this is a hidden cost of collaborative programs, but the employment of formally designated liaison personnel between the institutions is a visible

and essential expenditure. They warned that there never seems to be adequate funding for inter-institutional coordination. It is to questions of funding that I turn now.

Section B: Funding Issues

1. Sectoral funding formulas

Collaborative programs, especially between institutions in different sectors, pose a problem for funding authorities in Ontario, because they don't fit the mold when it comes to current funding arrangements. Within both the CAAT and university sectors in Ontario, the distribution of provincial operating grants to institutions is determined by an enrolment driven funding formula. The CAAT formula differs considerably from the university formula, but they have at least three features in common. One is that for the most part, only enrolment in government approved programs is counted in determining funding. The second is that enrolment in each program is weighted according to a system of sectoral program weights. Within the universities funding mechanism, enrolment in a basic baccalaureate nursing program carries a weight of 2.0. In the CAATs formula, enrolment in a diploma nursing program carries a weight of 1.7. The third commonality is that in each sector, the formula is used to determine the total grant to a CAAT or university. There is no requirement that funds be distributed within CAATs and universities according to the same pattern by which the institution's grant is generated via the funding formula.

There are also some important differences between the formulas used in the two sectors. The principal difference is that the CAAT formula is far more enrolment sensitive than the university formula. Fluctuations in institutional enrolment translate directly into corresponding fluctuations in grants, but with a little time lag due to the use of a three year moving average of enrolment and a slip year relationship between enrolment and funding. In

the university formula there is a "corridor" provision, the effect of which is that a university's relative share of the total funding for the sector remains unchanged so long as its (weighted sum of) enrolment remains within a band (or corridor) of plus or minus three per cent. Its share is supposed to decline if enrolment falls by more than three per cent, and it has the right to try (with no guarantees that it will be successful) to negotiate an increase if its enrolment increases by more than three per cent. Because of the corridor system, an increase in enrolment in a university's nursing program would not necessarily - indeed, not likely - result in the university getting an increase in its operating grant, but it would, of course, get the additional tuition fee revenue. On the other hand, an increase in enrolment in a CAAT nursing program would, other things being equal, give the institution a greater share of the sectoral operating grant; and what may be more relevant in the face of recent enrolment trends in CAAT nursing programs, a decrease in enrolment would, again, other things equal, translate into a reduction in that institution's share of sectoral operating funding.

Based upon these formulas it is possible to calculate "a notional value" to CAATs and universities of a full-time nursing diploma or degree student. This is the amount of money that under certain assumptions a full-time student in the nursing programs could be said to generate for the institution. In the CAATs, for 1995/96, this amount would be $5,706. In addition, a full-time student would pay tuition fees of $1,275, resulting in a total of $6,981. For 1996/97, the basic funding unit declined, and the amount generated by the formula would be $5,508.

In the university sector, the amount generated by the funding formula for 1995/96 would be $7,361 per FTE. Tuition fees vary by institution, but a typical fee for nursing in 1995/96 was $2,451, giving a total of $9,812 per full-

time baccalaureate student. A full-time nursing student in a diploma program thus generates about 30% less funds for the institution than does a full-time nursing student in a baccalaureate program.

2. Weighting factors

As I noted, the program weights are used by the government to determine overall allocations to institutions. There is no requirement that institutions allocate funds internally according to the formula weighting system. However, the weighting system is well known to budget people and program administrators within colleges and universities, and it seems in many institutions to provide at least a starting point for internal budget allocation (especially in the CAATs). For this reason, program administrators are very concerned about the weights. Nursing and Health Science administrators in both sectors have expressed concern that the weights for nursing programs are too low. That is, that they do not accurately reflect the cost of running a nursing program relative to the costs of other programs. In particular, they have argued that the amount of faculty time required for clinical teaching and field supervision is not adequately captured by these weights. In the university sector, it is more or less acknowledged that there is not a close relationship between the relative weights and true relative costs, but that a rough approximation is adequate for purposes of global allocation of funding. Reevaluation of program weights has been looked upon as opening a Pandora's Box. A particularly serious problem in dealing with disputes over weights is what the economist Howard Bowen termed the "Revenue Theory of Costs in Higher Education" (Bowen, 1980, pp. 17-23). Bowen's argument was that institutions and departments try by whatever

means to obtain all the money that they can, and then they spend it all (if not more). Thus, data on institutional or program expenditures - which is the usual basis for cost studies - actually tells us more about success or failure in obtaining revenue than it tells us about costs.

For whatever reasons, there has been greater boldness in regard to reviewing weights in the college sector, and there have been periodic reviews of the weights. One, in fact, has just recently been carried out, using 1995 data, and much to the consternation of health science administrators the analysis did not provide a basis for increasing the weight for nursing programs. The Health Sciences Working Group in the Program Weights Review produced an alternative way of costing field supervision which might have warranted a moderate increase in the weight for nursing programs, but this alternative view was not accepted. On the other hand, some nursing faculty have suggested to me that much more of what is counted as field experience is now an observational experience rather than a hands-on experience than used to be the case. They suggest that observational experience is valuable, but it is not the same as hands-on experience, and the student's education suffers as a result of the reduction in the hands-on component. It is alleged that programs have had to move in this direction because of reductions in funding; and having moved in this direction, the data on program expenditures reflect the compromises which educators have been forced to make rather than what educators think is appropriate. Thus, the Revenue Theory of Costs results in a vicious circle: educational programs are scaled down because of insufficient revenue; operating them with insufficient revenue yields apparent cost figures which fail to justify claims for greater funding.

3. How to allocate grants between institutions?

In a collaborative baccalaureate program in nursing, some of the instruction would be provided in the CAAT and some would be provided in the university. Thus, there is a question of how funding from the provincial government would be channeled to the two institutions for these instructional activities. Other provinces which have implemented collaborative baccalaureate programs have faced the same question, but their task was not as complicated because those provinces do not use a strict enrolment driven formula for allocating funds to colleges and universities. There it is possible to make discretionary allocations. For example, in Alberta, Mount Royal College, the University of Calgary, and Foothills Hospital implemented a collaborative program in 1993. In 1994, when the hospital portion of the program was closed, the government gave half of the education grant that the hospital had been getting (3.9 million dollars in total) to Mount Royal College and half to Calgary. Such a discretionary approach to allocation of operating funding would be impossible for Ontario under present funding arrangements.

a. on the basis of hours of instruction

If the preference is to allocate funding within the present formulas, one way of doing that would be on the basis of the actual number of hours that a student was registered for instruction in each institution. Similarly, students could pay tuition to each institution on a per course, or per hour of instruction, basis. There are, however, a few problems with this approach. One is that a student might be registered a sufficient number of hours in one institution to be considered a full-time student in that sector. In such case, the

other institution would not be entitled to claim the hours for which the student attends it on a part-time basis. If the student attends each institution for fewer hours than needed to be considered a full-time student in either, then each institution could count the hours in its totals of part-time attendance. However, since it takes a greater sum of part-time hours to generate the same funding as the number of hours that a full-time student is enrolled (at least in the CAATs funding formula), reporting the student's program in terms of part-time hours at each institution likely would generate less combined income for the two institutions than the weighted average of one full-time student, the weights being the proportion of time the student attends each institution. The alternative of counting the student in each sector on the basis of the proportion of the student's total hours of instruction spent in that sector's institution would be the most straightforward approach. However, this might conflict with the policies for measuring part-time enrolment in one or both sectoral formulas. Besides these issues, the data that would have to be provided to the government would be complex, detailed, and voluminous, conflicting with one of the criteria for formula funding, that it be relatively simple to administer.

b. by years in each institution

The allocation of funding is easier to deal with in situations where the student spends an entire year in one institution or the other. This is the case in the TPT Model, with the first two years in the CAAT, and the next two in the university. It is also partly the pattern in some other models, for example, one in which the student spends the first year in the university, the second year in the CAAT, and the third and fourth years divided between the two. In

the TPT, for example, the student could register in the CAAT for the first two years, pay tuition to the CAAT, and be included as a full-time student in the CAAT's enrolment counts for funding. Similarly, in the third and fourth years, the student could register at, pay tuition to, and be included in the enrolment counts of, the university. Possibly, the university could argue that it is being short-changed under this arrangement insofar as the funding formula weight is an average for all four years of the baccalaureate program, and the third and fourth years may be more costly to provide than the first two. Analogously, the CAAT would be getting a windfall if the third year there is more costly than the first two.

Another spin on the above scenario is to observe that students are in effect in a degree program during the first two years of a TPT. In collaboration, the two institutions have designed a curriculum and delivery strategy for the first two years which meet the requirements of a baccalaureate program. It just happens to be delivered in a CAAT. That being the case, one could argue plausibly that it is the program that should determine funding, not the institution in which it is delivered. This principle, after all, is applied within each sector, i.e. the same program generates the same revenue per student in all colleges (with adjustments for institutional size and northern locale in the CAATs formula). Under that argument, baccalaureate credit programs in the CAATs would be entitled to funding at the rate in the university sector formula for these first two years. Similarly, it could be argued that since students are effectively enrolled in a degree program, they should pay university tuition rather than CAAT tuition.

There are obvious counter-arguments to the propositions in the previous paragraph. True costs of programs are probably more influenced by the institution or sector which provides them than by their curriculum

content. For students, the experience of attending a university is qualitatively different than attending a CAAT - even in the event that the content of the courses they take is the same - and it is that experience that they are paying for.

Helping to confirm that all things imaginable in this area of practice are possible, it is common in collaborative programs in another province for students to attend and be instructed by the staff of a community college, for at least part of the program, but for them to register in the university and pay university tuition fees - which in that province are about 50% greater than community college tuition fees. In one case, the college provides the second year of the program and about half of the third and fourth years, but the students register and pay tuition at the university for all four years. The university shares the tuition revenue with the college[8].

Another case started as a TPT program between a community college which is in a different community than its partner university. Originally the third and fourth years were provided by the university at the site of the college, using college faculty hired on contract by the university, and faculty from the university making trips to the college. Now the college provides the third year as well as the first two, after which students register in and pay tuition to the university. The university, in turn, contracts with the college to deliver the fourth year of the program on its behalf. So the fourth year students are taking instruction from college faculty on college premises, but paying university tuition fees. Some problems with this arrangement are yet to be resolved. Apparently, fourth year students experience some difficulty accessing student services. They are not eligible for the college's services

[8]My understanding is that the revenue is shared on the basis of the distribution of instructional contributions of the two institutions, which is intended to be 50-50. However, I was not able to confirm this, or get precise information on funding of programs in other provinces.

because they are registered in the university; however, they are too distant from the university to make use of its services. As with the example of student parking given earlier, it is a curious thing that as a rule the instructional aspects of inter-institutional collaboration are much easier to manage than the support services.

These examples show that there is a precedent in another province for students paying university tuition while attending a community college. Ultimately what the question boils down to is whether it is the institutional environment or the content of the program that should determine the level of tuition. Since the best answer is probably, both, the appropriate level of tuition fees is probably somewhere between the rates for the two sectors. But as there is no legal framework for charging a tuition fee between the CAAT and university fees, it probably has to be one or the other. The choice between the two seems to me totally arbitrary, as either could be justified by those who favour it, attacked by those who don't. However, there is at least one way in which a fee intermediate between the CAAT and university fee could be an indirect outcome. That is in the case of the hybrid model described earlier. The proposal is that in the first two years, the students would register in the CAAT and take most of their courses in the CAAT, but two courses each semester would be taken in the university. If these students were to pay the basic full-time student tuition fee in the CAAT, and additionally paid fees for the courses that they take in the university, the result would be paying an amount of tuition that is somewhere between that of the fees for each sector. This seems to me an ingenious way of resolving the issue of determining the appropriate charge for a meal that is neither wholly fish nor fowl!

A similar argument could be made in regard to the allocation of operating grants to colleges. Insofar as they are offering part of a university

degree program, they need additional resources to help bring the conditions of the program closer to university equivalence. However, at the mere thought of inventing some new program weight which would generate an amount of funding that is intermediate between the amounts generated by the present CAAT and university sector formulas, the whole funding mechanism would probably get an aggravated case of tilt.

For institutions using an articulated model, the solution to the operating grant distribution problem is obvious and straightforward. For example, with the TPT, during the first two years, when students are in the CAAT, they would earn income for the CAAT through the funding formula in the way that diploma students do now. Similarly, the university would get the funding through the university formula for the third and fourth years. Insofar as the cost of nursing in these CAATs would be reduced by virtue of not doing the more expensive third year, there might be some saving relative to present situation. However, any such saving could easily be put to making the context of the program more like that of the university, for example supporting initiatives in research and professional development. Alternatively, if the university can demonstrate to its CAAT partners that substantial costs have been shifted to it as a result of the new concentration on third and fourth years, they could negotiate a sharing of any apparent "surplus" in the grants to the CAATs[9].

c. allocating revenue in the integrated model

[9]Obviously, in today's circumstances of underfunding, any notion of a "surplus" is relative. In this case it is relative to the relationship between funding and needs when the CAAT had responsibility for providing third year instruction as well as the first two.

The funding distribution problem is much thornier and murkier in the case of integrated programs. In considering that problem, it should be recalled that because of the corridor system, an increase in enrolment in a university's nursing program would not necessarily - indeed, not likely - result in the university getting an increase in its operating grant. Whether the university's nursing program would be allocated more money, from a fixed sized pie, would depend upon budgetary policies and practices within the university. Possibly as part of an overall institutional enrolment management strategy, in which enrolment was declining or reduced in some other area, the nursing program could count on an increase in its internal funding. Because of the enrolment sensitivity of the CAAT formula, however, if a CAAT were to register more students in its nursing program - and enrolment in the rest of the college remained the same - the college would get an increase in its share of sectoral funding. Thus, if total enrolment in nursing were increasing, a collaborative program might do better, in the sense of increasing the combined operating revenue of the two participating institutions (which they could share as deemed appropriate), by registering the incremental students in the CAAT. In the face of overall enrolment decline in nursing, from the perspective of the two participating institutions it might be advantageous to keep as many students as possible registered in the CAAT, because enrolment decline in the CAAT is not cushioned by a corridor.

The above analysis does not take account of tuition fee income which was about twice as much per student registered in the university than in the CAAT in 1995/96. Moreover, it is probable that tuition fees will rise faster in the university sector than in the CAATs and may be deregulated in the universities. When tuition income is considered, it may be the case that

registering as many students as possible in the university would generate the maximum total revenue for the two institutions. The calculations needed to determine how student registration should be allocated between participating institutions in order to maximize the combined revenue of the two institutions resulting from their nursing students could be quite complex, though probably not a great challenge to the financial planning offices of most universities and colleges. One option in funding collaborative programs would be simply to allow institutions to allocate student registration between them as they choose. Presumably, they would divide registration between them in the way that would maximize their combined revenue. This would be a great device for getting the planning offices of CAATs and universities to work together. However, it could be nightmarish for provincial funding authorities, and a little unseemly besides. I shall recommend a simpler approach, but one which still has some flexibility.

For application of the present sectoral funding formulas, what is needed is an approach which is simple, expeditious, and can be applied to all institutions. Since the goal in the integrated programs seems to be that each institution should provide approximately half the instruction, a potential solution would be that when an institution declares that its nursing program (or one of its nursing programs) is of the integrated type, it would be entitled to claim 50% of the FTE enrolment for funding through its sectoral funding mechanism. Then the institutions can compare their accounts and make adjustments in cash or in kind (e.g. teaching services) if the actual balance of contributions deviates from 50-50, or to achieve an alternative target which they might mutually set for the balance of contributions from the respective institutions. The essential idea is that in a joint venture like this, detailed record keeping is needed for partners to arrive at a mutually equitable

distribution of expenditures and rewards. There is no reason for the government to be a party to such reconciliation.

A complicating factor is that, as noted earlier, programs within institutions do not necessarily receive funds in proportion to the income units which their enrolment notionally generates via sectoral funding formulas. A regime based on inter-institutional revenue sharing could invite gamesmanship on the part of those so inclined, i.e. one institution allocating less to its nursing program in an effort to manipulate the other into making up the difference. However, a clear statement of the funding policy and objectives, good record keeping, and recognition that all institutions are suffering from underfunding, would more likely help to ensure that each institution pays its fair share. Also, collaboration could not survive long in the face of such machinations.

4. A funding proposal

Based upon the foregoing discussion, the funding proposal here is that each institution participating in a collaborative baccalaureate program declare formally to the Ministry of Education and Training whether its program is an articulated or integrated one. Those which elect articulated would indicate which years of the program they are responsible for providing and their FTE enrolment in those years. This figure will be part of their institution's enrolment count.

Those which elect integrated would indicate the total FTE enrolment in the program, and 50% of that figure would be included in their institution's enrolment count. Institutions which employ a hybrid model must elect to file their enrolment under either the articulated or integrated

designation. In making this choice they would determine which designation best describes the dominant features of the program, and which approach to measuring enrolment would provide a better starting point for reconciliation. The partner institutions would have to agree on the designation, but it would be completely their choice.

With either model, but especially with the integrated model, the actual distribution of costs between institutions would probably differ from the distribution of attributed enrolment counts (e.g. the 50-50 distribution in the integrated model), and as well it would likely differ from year to year. The detailed accounting records necessary to show the "true" distribution of costs between institutions is not appropriate to bring into the provincial funding mechanism. It is more sensible for the collaborating institutions to reconcile costs-revenue imbalances directly between one another.

An alternative to the 50-50 allocation for integrated programs which might be considered would be to allow 100% of the enrolment to be claimed in the university funding mechanism, and 0% in the CAAT sector mechanism. In a sense, this would be appropriate in view of the fact that students are in a degree program. However, if this option is allowed for integrated programs it should be allowed also for articulated programs, since from a resource contribution point of view the only difference between the two is in the timing of each institution's contributions. With the 100-0 split of operating grant funding, the CAAT nursing education unit would get all its funding directly from the university. This could be advantageous in the sense that its funds would not be at the discretion of the college. However, I am inclined to think that the more likely effect of this arrangement would be to marginalize nursing education in the CAATs. The exclusion from Ministry operating funding could reduce nursing's stature and security within the

college. Administrators in Alberta colleges with whom I spoke felt that receiving a stable operating grant directly from the Ministry helped to maintain the status and viability of the colleges' activities in nursing.

5. A tuition fee proposal

I have argued earlier that there is no rational basis for choosing whether students should pay CAAT or university rates of tuition for the portion of their baccalaureate program which is provided by the CAAT. That being the case, a rate of tuition that is intermediate between the two seems appropriate - but not feasible to levy. Earlier I related the tuition fee proposal of a hybrid case which called for students in the CAAT portion of their program to pay the full-time tuition fee at the CAAT, and on top of that to pay course tuition fees for two full courses per year at the university. This seems a perfectly reasonable arrangement and an option which should be available for the CAAT portions of articulated programs.

In the integrated model, the question is which institution should the student be registered in (and pay tuition to) each year. Some proposals which I have seen for the integrated model call for students to pay university tuition for all four years. This does not seem unreasonable given the nature of the program, and assuming that students would have full access to all resources and services of the university for all four years. It should also be made clear that the CAAT partner will find some way of allowing students to register for courses there without paying any course tuition fee, because the university level of tuition should be the absolute maximum allowed. Still, in keeping with argument which I made earlier, I think it would be preferable if in four year integrated programs, students could be asked to pay university tuition for

a maximum of three years. That way the total tuition that they pay would be between the university and CAAT levels of tuition.

Finally, note must be taken of the concerns indicated earlier about raising the financial barriers for many who formerly went into diploma programs but who in the future will effectively be channeled into baccalaureate programs. To deal with the combination for these students of having to pay university tuition fees for at least half the program and doing four instead of three years, there need to be special arrangements for student financial assistance. Many students in all programs are experiencing increased financial difficulty. What would be unique about these students is having their program lengthened, even if that is in order to obtain a more valuable credential. Recognizing this additional cost, possibly the most appropriate form of special financial assistance - during a transitional period - would be needs based scholarships for fourth year, so that no student is forced to opt for a diploma rather than a baccalaureate (so long as the option exists), or drop out, for financial reasons. This would be, hopefully, on top of whatever general improvements in student assistance for all students are made in the near future.

Concluding Comments

Nursing education in Ontario is on the brink of something approaching a revolution. For the past two decades, there have been two separate and independent routes for preparing nurses. Until recently, about four-fifths of newly trained nurses were diploma graduates of CAAT nursing programs, and one-fifth were baccalaureate graduates of university nursing programs. Now, it is quite possible that in the near future the vast bulk of new entrants to the field of nursing will be baccalaureate graduates, many if not most of them from collaborative programs which utilize the combined resources of Ontario's CAATs and its universities.

The developmental work for this potential change in nursing education has been done largely at the grass roots, through the efforts of nursing program administrators and faculty in the colleges and universities, meeting together on a bilateral or regional institutional basis. In developing a new framework for nursing education, these educators have been responding to certain pressures, for example, increased concern about the costs of health care and postsecondary education, and anticipating future developments, for example in the way that health care will be provided and evolving ideas about the best way to provide professional education. That nursing educators in virtually every CAAT and university in Ontario which has a nursing program have worked together at their own initiative to develop a creative and cost-conscious way to advance nursing education in a time of great financial difficulty and rapid change shows postsecondary education at its best: responsive, proactive, flexible, innovative, and breaking down walls rather than shoring them up.

The policy issues in collaborative baccalaureate programs in nursing, including the economic and financial issues, are exceedingly complex. They involve divided (and to some extent, unclear) jurisdiction between different Ministries and agencies, and between different financial systems under the same Ministry. They are further complicated by a lack of precision about goals and lack of knowledge about the effects of different means to attain them, and by the absence of important data. Given the complexity of the problem, and the possibility that decisions by the relevant Ministries about how to deal with it could unwittingly establish precedents for other fields, it is understandable that the Ontario Government has been cautious in deciding how to respond to proposals from colleges and universities for the establishment of collaborative programs.

From Government's point of view, part of the problem may be that in facilitating collaborative nursing programs the Government may fear that it will be seen as having taken a stand in favour of entry to practice. This is an entirely realistic fear, because the development of collaborative programs both assumes that the baccalaureate will be required for entry to practice, and is intended to help bring about that state of affairs. However, entry to practice is well on its way in the majority of provinces, and seems almost certain to come about in Ontario in the near future. The choice for the Ontario Government would seem now to be between helping the nursing profession to bring about this reform in the most efficient and humanistic way, and standing aloof to leave the profession, including its educational component, to work through the obstacles on its own.

Rather than a legislated approach to bringing about entry to practice, Ontario thus far has been taking the education route. The next major step in that route would be the establishment of collaborative baccalaureate programs

throughout the province. Although it is impossible to document the anticipated costs of these programs both because the proposals are still at a formative stage and the necessary data were not available, it is most likely that collaborative programs offer a way to substantially increase the number of baccalaureate prepared nurses in a less costly way than relying solely on universities to accomplish this. Many of the factors which would have the greatest influence on costs and the way that their effects would be felt through collaborative programs were analyzed in this paper.

Almost all the CAATs and universities which are involved in nursing education are currently a party to proposals for collaborative baccalaureate programs. Some of these proposals have been presented to the Government for approval. It is the understanding of all the college and university administrators responsible for these programs with whom I spoke that approval of the Ministry is required in order to commence the collaborative programs. I am not sure that this is true, but I can appreciate the perceptions of risk that institutions might incur should they initiate a collaborative program and then find their claim for funding rejected. In any case, it would certainly be a more comfortable situation if the Ministry of Education and Training were to let institutions know whether collaborative programs will be eligible for funding, and how they would be treated with respect to funding. Even more desirable would be for the Ministry to work with colleges and universities to devise effective financial arrangements for collaborative programs. I hope that the suggestions offered in this paper will be helpful in that regard.

If, on the other hand, the Government feels - possibly for some of the reasons discussed earlier in this paper - that collaborative programs in nursing are not something which it wishes to see developed, then it is

imperative to get that message out as soon as possible, before any more time and money is wasted in developing plans for such programs. In this eventuality too, the exhortations in recent years of Government Ministers and Commissions for CAATs and universities to work together for the benefit of students and society might need to be re-assessed.

Finally, while the bilateral and regional approach seems to have been very effective and energizing for curriculum planning and proposal development, it may be time to give some thought to the development of a provincial planning framework for collaborative programming. If there are going to be major adjustments in numbers of students admitted to nursing and closures of some programs, it would be important to examine how these changes add up on a provincial basis. Also, earlier I questioned the feasibility of determining the length of time the diploma would be retained on a regional, as opposed to a provincial, basis, as is called for in the Provincial Steering Committee's position statement on Education of the Nurse of the Future. Moreover, some allowance should probably be made for student mobility, particularly within the context of the articulated model. Students completing the CAAT portion of the program may wish to, or may have to, move from the locale of the university with which that CAAT has an agreement; or that university may be at full capacity while others have space for additional students. Some type of planning for collaborative programs at a provincial level may be helpful in facilitating mobility and smoothing out major differences in capacity utilization. It needn't be heavy handed, and it should respect local initiative, but some type of provincial framework could complement the creative work which has thus far been done at the local level by universities and CAATs in the province.

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